



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/757,322	01/14/2004	Paul W. Luebke	15352/18	3514

7590 06/13/2006

Patrick W. Rasche  
Armstrong Teasdale LLP  
Suite 2600  
One Metropolitan Square  
St. Louis, MO 63102

EXAMINER
----------

DUONG, THO V

ART UNIT	PAPER NUMBER
----------	--------------

3753

DATE MAILED: 06/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

88

<b>Office Action Summary</b>	<b>Application No.</b> 10/757,322	<b>Applicant(s)</b> LUEBKE, PAUL W.	
	<b>Examiner</b> Tho v. Duong	<b>Art Unit</b> 3753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 January 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>1/10/05</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Oswalt et al.

(US 5,761,916). Oswalt discloses (figures 1-2) a modular cooling system for cooling a manufacturing process machine, the cooling loop system comprises a movable chassis (18) having wheels (22); a coolant piping loop mounted on the chassis; a pump (48); a main coolant inlet (outlet of reservoir 47 leading to pump 48) configured to connect to the chilled water system; and at least one coolant inlet ( at valve 14) configured to connect to the manufacturing process machine (12); a main coolant outlet (43) configured to connect to the chilled water system; and at least one coolant outlet (at valve 13) configured to connect the manufacturing process machine; a flow sensor (51) for measuring coolant flow in the coolant piping loop; a flow control valve (13,14,42) for controlling the flow of fresh coolant into the coolant piping loop; the cooling piping loop configured to recirculate coolant through the coolant piping loop and the manufacturing machine (12); a controller (19) mounted on the chassis and operationally coupled to temperature sensors, the flow sensor and the flow control valve. Regarding claim 4, Oswalt further discloses (column 4, line 1-13) that the cooling loop system further comprises a first temperature sensor to measure the temperature of the incoming coolant from the chilled water system ( water at outlet of the evaporator); a second temperature sensor (53) to measure

Art Unit: 3753

the temperature of the coolant before entering the machine (12); and a third temperature sensor (54) to measure the temperature of the coolant leaving the manufacturing process machine; a pump controller (the flow display section has “pump on”, “start”, “stop”, “up” and “down” features, which inherently is a pump controller. Regarding claim 8, the main cooling water inlet line, cooling water outlet, cooling water inlet; and main water cooling water outlet are shown in figure A (bellow), wherein the main cooling water inlet line comprises a temperature sensor (54), the second temperature sensor ( 53) located upstream from the water outlet; the third temperature sensor (described in column 4, lines 6-7) located down stream from the water inlet.

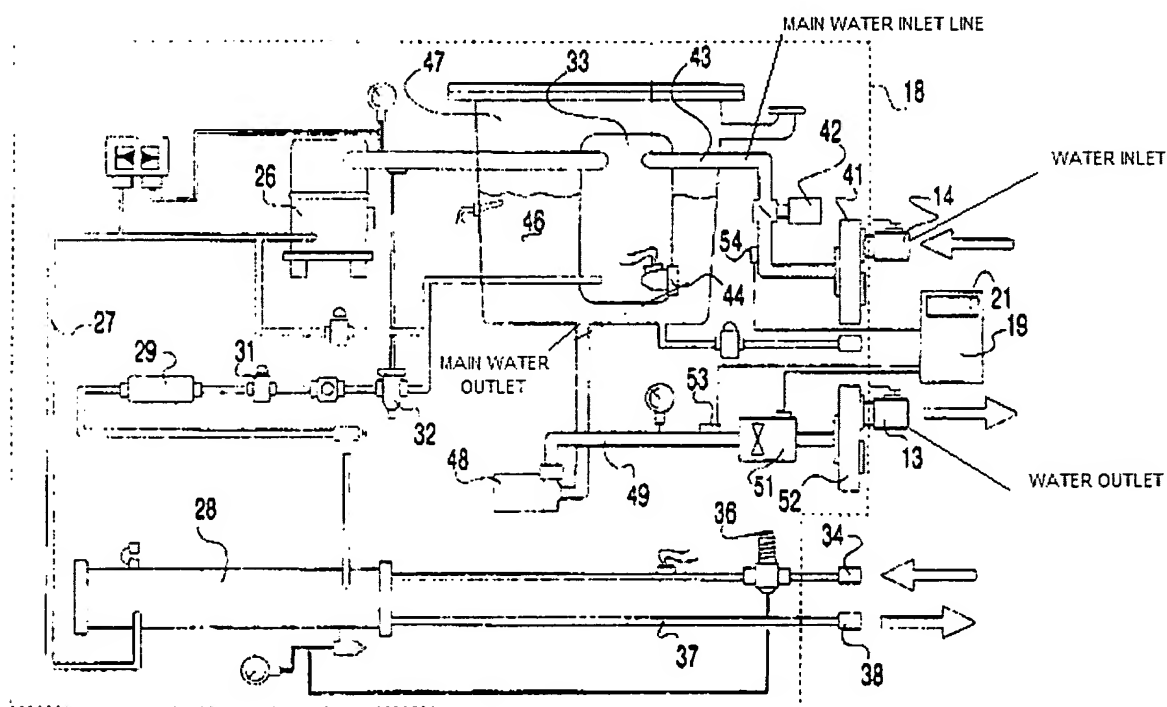


FIGURE A: THE MODIFIED FIGURE CORRESPONDES TO FIGURE 2 WITH LIMITATION SHOWN.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oswalt in view of Domnick et al. (US 2004/0035126A1). Oswalt substantially discloses all of applicant's claimed invention as discussed above except for the limitation of controlling the flow of the fluid by using the pump controller and the control valve. Domnick discloses (figure 3 and paragraphs 16 and 24) a chiller, which controls the fluid within the chilling system by using the pump controller (VFD) and the valve controller (370) communicating with a main controller (340) for a purpose of improving the efficiency of the chilling system. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use Domnick's teaching in Oswalt chilling system for a purpose of improving the efficiency of the chilling system.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Babington (US 4,495,777) discloses a closed cooling system.

Oswalt et al. (US 4,850,201) discloses a precision-controlled water chiller.

Wieder et al. (US 4,420,446) discloses a method for mold temperature control.

Art Unit: 3753

Shultz (US 4,031,950) discloses a process fluid circulation and temperature control system.

Sloan et al. (US 6,854,514) discloses a temperature control apparatus and method with recirculated coolant.

Mizuno et al. (US 4,729,424) discloses a cooling system for electronic equipment.

Oswalt et al. (US 5,960,857) discloses a system temperature control tank with integral modulator valve and flow meter.

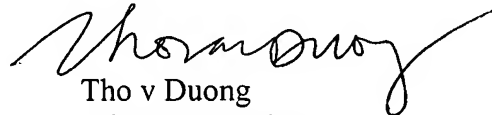
McMullin (US 5,083,438) discloses a chiller monitoring system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tho v. Duong whose telephone number is 571-272-4793. The examiner can normally be reached on M-F (first Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Keasel Eric can be reached on 571-272-4929. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3753

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Tho v Duong  
Primary Examiner  
Art Unit 3753



TD  
June 9, 2006